

# PL 805 Relinquishment Report

December 2017



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### **1. Summary and Conclusion**

The evaluation of PL 805 resulted in a prospect portfolio consisting of two prospects, Signalen (Triassic) and Paviljongen (Jurassic) and one lead, Flasken (Tertiary).

The conclusion of the work is that the risked resource potential in PL805 are too small to recommend exploration drilling and hence the decision to relinquish the license was made by the partnership in November 2017.

### 2. Introduction

The license PL 805 is on the southern tip of the Loppa high (Fig. 1) and comprise 350  $km^2$  of the blocks 7120/2, 7120/3 and 7121/1.



Figure 1. PL 805 location with structural elements





Figure 2. Prospectivity portfolio at APA 2014 resulting in award of PL805.

### 3. License history

PL805 was awarded as part of TFO 2014 (Fig. 2) on 6<sup>th</sup> February 2015, with a seven years initial license period to Lundin (40% and operator) and the partners Explora, North and Petoro with 20% each. When North bought Explora North's part of the license increased to 40%. This 40% share was transferred to Lundin in October 2017.

### 4. Completed work program

The work commitment in the PL805 license was to take a decision to drill an exploration well before 6<sup>th</sup> February 2017.

After reprocessing of DOL14001 (LN15M02), the partnership wanted to see if further improvement could be done by conducting a partial and internal reprocessing of the data relevant for the Signalen prospect. To await this result of the internal reprocessing the decision to drill was extended by one year.





*Figure 4. Seismic coverage of DOL14001 with initial prospectivity. This survey was reprocessed (LN15M02) and is the seismic database in the license.* 



### 5. Prospectivity evaluation

The evaluation of the prospectivity resulted in two prospects, Signalen and Paviljongen, and one lead, Flasken (Fig. 5). Signalen is the same as Alm from the APA application, but Paviljongen and Flasken was not identified at the time of APA aplication.



Fig. 5. Prospectivity portfolio status by end 2017





*Fig. 6. Signalen prospect. FFA horizon slice Top snadd* +58 *ms, shows peak brightening related to structural high.* 



*Fig. 7.* In-house seismic inversion using the Pcube+ software shows that a thin oil leg is possible given the calibrated rock-physics model and the special processed seismic. However, the resulting oil volume potential is too small to be of commercial interest.



The Alm prospect in the APA application was renamed to Signalen after license award. The trap is a 4-way closure and has amplitude effects (Fig. 6). The prospect is part of a north south trending channel system at the Mid Triassic Snadd fm level (Fig. 7). The Chance of success is relatively high for the Signalen prospect, 0.32, but probability for finding oil is lower. Main risk is retention. Regardless the estimated volumes are too small to justify drilling. The areal extent of the prospect is based on seismic inversion and gives a mean resource estimate of 20 mmbbls recoverable oil.



*Fig. 8. East west seismic line across the Signalen prospect.* 

The Paviljongen prospect is bounded towards the Asterias fault complex to the north. Mid Jurassic Stø fm is the supposed reservoir. Chance of success is estimated to be 0.13, with trap and seal as major risks. The prospect requires a high HC column to accumulate large volumes. A 500 meter hydrocarbon column is required to accumulate approximately 100 mmbbls oil. This number is assuming a 50/50 gas/oil column model.





*Fig. 9. The Paviljongen prospect sits on a rollover structure on the hangingwall side of the Asterias fault complex. Reservoir is expected to be Stø fm. A large hydrocarbon column of 500 is required to provide commercial amounts of oil. There is an expected low likelihood of finding large retained hydrocarbon columns of this magnitude in the Barents sea generally, and at the Asterias fault complex in particular.* 

The Flasken prospect was down-graded to lead as the reservoir (Tertiary transgressive sandstone) cannot be mapped with confidence on seismic data.

